

Date: Tue, 30 Aug 94 04:30:26 PDT
From: Ham-Homebrew Mailing List and Newsgroup <ham-homebrew@ucsd.edu>
Errors-To: Ham-Homebrew-Errors@UCSD.Edu
Reply-To: Ham-Homebrew@UCSD.Edu
Precedence: Bulk
Subject: Ham-Homebrew Digest V94 #258
To: Ham-Homebrew

Ham-Homebrew Digest Tue, 30 Aug 94 Volume 94 : Issue 258

Today's Topics:

 10M - 20M TRANSVERTER?
 6m amplifier using vacuum tubes
 Books on RDF antennas, gear... (2 msgs)
 FM transmitter
FSTV: Modifying a Gemini RABBIT for amateur service? (2 msgs)
 TNC-2 Source

Send Replies or notes for publication to: <Ham-Homebrew@UCSD.Edu>
Send subscription requests to: <Ham-Homebrew-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Homebrew Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-homebrew".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: Mon, 29 Aug 1994 13:51:51 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!swrinde!gatech!concert!
hearst.acc.Virginia.EDU!murdoch!uvacs.cs.Virginia.EDU!rar3h@network.ucsd.edu
Subject: 10M - 20M TRANSVERTER?
To: ham-homebrew@ucsd.edu

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Robert A. Ross University Of Virginia
Research Scientist Center for Semicustom Integrated Systems
rar3h@virginia.edu INTERNET Systems Integration Laboratory
804-982-2227 VOICE
804-982-2214 FAX "Implementation is far from but a detail"

Since 10 Meters is quite dead lately, I'd like to build a 10m to/from
20m transverter to use with my RS HTX-100 10 m rig.

Does anyone know where plans for such a thing could be obtained?
Has anyone done this before?

Thanks
WA2MFI
BOB
rar3h@virginia.edu

Date: Mon, 29 Aug 1994 17:00:54 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!msuinfo!netnews.upenn.edu!
news.drexel.edu!news.ge.com!knight.vf.ge.com!nadir!hbrown@network.ucsd.edu
Subject: 6m amplifier using vacuum tubes
To: ham-homebrew@ucsd.edu

My experience with push pull amplifiers is somewhat limited. My main experience is with the "Plumbers Delight" 2 meter amplifiers that came out in the 60's. Yes they work but it's not easy to get them running and staying running with heat and component drift. The best thing ythat ever happened to 2 tube 4CX250 amplifiers was the paralled designs origionated by Dick, K2RIW, for 432 and later by Fred Murray for 6 thru 220 MHz. They work and are much less touchy to tuneup and keep working. My attention span i
s much too short these days for push-pull amps.

73,
Harry, W3IIT

Date: Sun, 28 Aug 1994 21:44:04 GMT
From: ihnp4.ucsd.edu!news.cerf.net!mvb.saic.com!eskimo!ghopper@network.ucsd.edu
Subject: Books on RDF antennas, gear...
To: ham-homebrew@ucsd.edu

I have receintly been bitten by the DF bug and after using borrowed gear for the last few hunts, would like to build some of my own. I have looked at several books out there and read some of the articles in 73 magazine but owing to the small DF community here in Snohomish county (if any of you out there are here, call me (206)316-3126) I am looking for opinions on kits, books and the like. I'd rather not buy a complete unit since I enjoy putting together new projects. I don't really have solid preferences yet so I'm open to anything.
Grant

Date: Mon, 29 Aug 1994 14:39:00 GMT

From: newsflash.concordia.ca!pavo.concordia.ca!md_hill@uunet.uu.net
Subject: Books on RDF antennas, gear...
To: ham-homebrew@ucsd.edu

In article <Cv9LpM.M6D@eskimo.com>, ghopper@eskimo.com (Grant Hopper) writes...
>I have recently been bitten by the DF bug and after using borrowed gear
>for the last few hunts, would like to build some of my own. I have
>looked at several books out there and read some of the articles in 73
>magazine but owing to the small DF community here in Snohomish county
>(if any of you out there are here, call me (206)316-3126)
>I am looking for opinions on kits, books and the like. I'd rather not
>buy a complete unit since I enjoy putting together new projects. I don't
>really have solid preferences yet so I'm open to anything.
>Grant

By far the most useful reference I have found is the Transmitter Hunting:
Radio Direction Finding Simplified by Moell and Curlee ISBN 0-8306-2701-4.
The publisher is TAB Books. Written by two experienced and avid hunters, it
covers all you could want to know while being very readable. LOTS of U-build
projects, schematics, ideas etc. Costs U.S. \$19.95 (I paid about \$27 CDN) worth
every penny.

73 de VE2HVV

Date: 29 Aug 1994 14:31:47 GMT
From: ihnp4.ucsd.edu!dog.ee.lbl.gov!agate!howland.reston.ans.net!
vixen.cso.uiuc.edu!newsfeed.ksu.ksu.edu!moe.ksu.ksu.edu!wizard.uark.edu!comp!
jreynold@network.ucsd.edu
Subject: FM transmitter
To: ham-homebrew@ucsd.edu

lou.brown@ase.com (Lou Brown) writes:
>transmitter ICs that are good up to 1 GHz @ 10 mw. Even better, since you
>are at a university, call the Motorola's university support office and get
>some free samples. I'm not sure what the number is, but my friend had seven
>of these chips sent to him when he was at school last year.
>Good luck,
>Lou

If you find the number, please email it to me:

jreynold@comp.uark.edu
jpr1@engr.uark.edu

Date: 28 Aug 1994 19:46:32 -0500
From: ihnp4.ucsd.edu!swrinde!cs.utexas.edu!gerald@cc.utexas.edu!
dewey.cc.utexas.edu!not-for-mail@network.ucsd.edu
Subject: FSTV: Modifying a Gemini RABBIT for amateur service?
To: ham-homebrew@ucsd.edu

Just wondering,

I could swear I heard something over the last two years about
modifying a Gemini RABBIT VCR-to-TV wireless TX-RX system [or at least the
TX part] for amateur FSTV service. Has this been done, or at least, is
it possible? If so, over what bands [I'm not certain what freqs the RABBIT
works on]?

Thanx,
R. Camama

Date: Mon, 29 Aug 1994 15:36:54 GMT
From: netcomsv!netcom.com!btoback@decwrl.dec.com
Subject: FSTV: Modifying a Gemini RABBIT for amateur service?
To: ham-homebrew@ucsd.edu

In article <33rb58\$9kr@dewey.cc.utexas.edu> rcamama@dewey.cc.utexas.edu (Robert
Camama) writes:

>
>Just wondering,
> I could swear I heard something over the last two years about
>modifying a Gemini RABBIT VCR-to-TV wireless TX-RX system [or at least the
>TX part] for amateur FSTV service. Has this been done, or at least, is
>it possible? If so, over what bands [I'm not certain what freqs the RABBIT
>works on]?

The RABBIT works at around 900 MHz and can easily be modified for use on
the 33cm ham band. There was an article in the November or October 1993
73 magazine that described the modification and a small power amplifier.

-- Bruce KN6MN

Date: 28 Aug 1994 11:58:21 GMT
From: ihnp4.ucsd.edu!agate!howland.reston.ans.net!EU.net!sun4n1!freya.let.rug.nl!
rugch4!rugch4.chem.rug.nl!rudi@network.ucsd.edu
Subject: TNC-2 Source
To: ham-homebrew@ucsd.edu

HI all,

I'm desperately looking for the Z-80 SOURCE CODE for the TNC-2, as I want to build a Z-80 TNC with the new highly-integrated Z-80 KIO-chip which combines all peripherals into one chip. I have to modify the source for the location (addresses) of the peripherals.

I scanned the internet, but with no success. The (internet-available) tapr disks seem only to contain the HEX-images for the firmware not the source. I faxed the TAPR directly, but got no response.

Maybe some of you know the (internet) location of the source or do have the source. If so, please share it with me ! thanks !!

rudi
(PE1NFP)

--

Rudi van Drunen	Internet: rudi@chem.rug.nl
	: rudi@rugrcx.rug.nl
Dept. of Biophysical Chemistry	X400 : c=nl;admd=400net;prmd=surf;
University of Groningen	o=rug;ou=chem;s=van.drunen;i=R;
The Netherlands	Bitnet:

Date: Mon, 29 Aug 1994 01:09:21 GMT
From: ihnp4.ucsd.edu!swrinde!howland.reston.ans.net!torn!nott!cunews!
freenet.carleton.ca!FreeNet.Carleton.CA!ab717@network.ucsd.edu
To: ham-homebrew@ucsd.edu

References <32bk4i\$pdf@thor.cs.utexas.edu>, <32c5hi\$mtg@ohlone.kn.PacBell.COM>,
<776791198snA

Reply-To : ab717@FreeNet.Carleton.CA (A.R. Bicknell)

Subject : Re: regenerative sets and selectivity

In a previous article, jeroen@dxcern.cern.ch (Jeroen Belleman) says:

>In article <fred-mckenzie-1708941430140001@128.159.123.111>,
>Fred McKenzie <fred-mckenzie@ksc.nasa.gov> wrote:
>>The "super-regenerative" receiver (detector) should also be considered in
>>the discussion. I never understood how they worked,...
>
>These things have always puzzled me too.
>As my current understanding goes, an oscillator tuned to the
>approximate frequency of reception is periodically stopped and then

>allowed to restart at a rate of, say, 40KHz. If some received
>energy at the right frequency is coupled into the resonant
>circuit, the restart tends to be quicker, with a noticable effect
>on the current drawn by the oscillator.

>

>The current drawn by the oscillator contains the output signal.

>

>Is this how it works?

>

>Best regards,

>Jeroen Belleman

>

Build an amplifier with a gain of μ . build a network (attenuator)
to connect the o/p to the i/p with a gain (loss) of β . The amplifier
multiplies the signal μ times and the output is fed back to modify the
input β times the output. The output is $\text{input} \times \mu \times \beta$. If β is
negative (out of phase) then the bandwidth is extended, the noise is
increased, the distortion is decreased. (audio). If β is positive the
bandwidth is decreased, the noise is decreased, and the distortion is
increased (rf). I highly recommend 'high Fidelity circuit design' by Norman H.
Crowhurst and George Fletcher Cooper, Copyright Gernsback Library, Inc. 1956.

--

He who laughs last lives longer.

Bert Bicknell

Date: Mon, 29 Aug 1994 15:22:34 GMT

From: psinnntp!arrl.org!dnewkirk@uunet.uu.net

To: ham-homebrew@ucsd.edu

References <fred-mckenzie-1708941430140001@128.159.123.111>,
<1994Aug22.134836.8674@dxcern.cern.ch><1994Aug25.003045.10635@novell.com>,
<515@ted.win.net>

Subject : Re: regenerative sets and selectivity

Michael Silva (mjsilva@ted.win.net) wrote:

: By chance, I had access to some old QST's a while back and happened to
: come upon issues dating to the "dawn" of the superregen, so maybe I can
: add a little background. The concept, invented by Armstrong, was
: introduced to the world in 1922, and it was immediately heralded as the
: receiver of the future, rendering current technology (regeneration)
: obsolete. Most of the original circuits actually used a separate
: oscillator to provide the switching signal to the received-frequency
: oscillator (terminology my own!). Within a few months, the euphoria
: was wearing off, and QST was publishing articles asking "how come our

: superregens aren't any better?" Within a year they seem to have faded
: from amateur view, although they did resurface with the move into 10,
: 5 and 2.5 meters in the late '20s / early '30s.

[*Empire of the Air* cite deleted]

The "switching" oscillator provides the *quenching* frequency. We have a
quench oscillator breadboard attributed to Armstrong in the ARRL Museum.

The main basic "can't do" with the superregen is that it can do heterodyne
reception. That lets out CW and SSB demodulation--the reason (well, CW at
least :-)) it didn't last in the pre-VHF era. Its broad selectivity also
makes it largely useless for narrowband FM, so a superregen is pretty much
only an AM and wideband-FM detector.

It's good to see that relatively little traffic on this topic has dwelt long
on the issue of how much a regen or a superregen radiates. (Any text that
says something like "Don't use those detectors; they radiate" is another
case of the specific case, or implementation, being taken as the general
case. An RF-amplifierless "direct-conversion" receiver, and likewise an
RF-amplifierless superhet with a poorly balanced mixer and insufficient
input selectivity, will also radiate, sometimes quite strongly.) A
reasonably unliteral RF amplifier stage, along with proper shielding, can
take care of detector or mixer radiation in any of these cases. Input
filtering (in superhets) also helps.

Data point: The 40-meter regen I published in Sep 1992 *QST* radiates--at a
level of roughly 12 picowatts into a 50-ohm antenna load.

Regards,

David Newkirk, WJ1Z
Senior Assistant Technical Editor, *QST*

End of Ham-Homebrew Digest V94 #258
